CLAIMS

1. A method of providing information about a real-world space, comprising the steps of :

(a) as each of multiple users moves through said space, virtual markers are deposited and
   stored to indicate associated locations visited by the user in the space;

(b) the virtual markers deposited in respect of said multiple users are aggregated, in
   dependence on their associated locations, either when being stored or subsequently;
   and

(c) data about the aggregated markers is used to provide information relevant to use of the
   space.

2. A method according to claim 1, wherein a plurality of storage location cells are provided that correspond to respective areas of said space, the virtual markers having associated strength values and each marker being stored and aggregated by having its strength value added to an existing aggregated strength value, if any, stored in the location cell that corresponds to the area covering the location associated with the marker.

3. A method according to claim 2, wherein the storage and aggregation of a said marker involves, in addition to increasing the aggregated strength value of the corresponding location cell by the strength value of the marker, increasing by a lesser amount the aggregated strength value of at least one location cell covering a said area adjacent to the area covering the location associated with the marker.

4. A method according to claim 1, wherein the individual markers that have been deposited are retained after marker aggregation in step (b), the markers deposited in respect of at least one user including information associating together those markers whereby to enable the trail taken by the user through the space to be determined.

5. A method according to claim 1, wherein said virtual markers are deposited automatically at one of:
   - predetermined intervals of time;
   - predetermined intervals of distance; or

- predetermined locations in said space.

6. A method according to claim 1, wherein the said virtual markers deposited in respect of each user are deposited by a mobile device carried by the user.

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7. A method according to claim 6, wherein the virtual markers are stored in a central system.

8. A method according to claim 1, wherein the said virtual markers are deposited and
10 stored by an infrastructure system that monitors the locations of the users.

9. A method according to claim 1, wherein step (c) comprises presenting, as said information, an image of a virtual landscape formed by the location-dependent aggregations of markers mapped to a representation of the space.

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10. A method according to claim 1, wherein in step (c) said information comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that follows ridges in a virtual landscape formed by the location-dependent aggregations of markers.

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11. A method according to claim 1, wherein in step (c) said information comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that follows troughs in a virtual landscape formed by the location-dependent aggregations of markers.

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12. A method according to claim 1, wherein in step (c) said information comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that avoids ridges in a virtual landscape formed by the location-dependent aggregations of markers.

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13. A method according to claim 1, wherein in step (c) said information comprises information about a path through the space, this information being derived by using the

marker aggregation data to determine a path that avoids troughs in a virtual landscape formed by the location-dependent aggregations of markers.

14. A method according to claim 1, wherein step (c) involves using the aggregated marker data to predict a next location for a further user moving through the space having regard to that user's current location, this predicted next location then being used to provide to a mobile device of the further user, as said information, either the identify of media items associated with that predicted next location or the items themselves.

15. A method according to claim 1, wherein in step (a) a said virtual marker is deposited when a said user reaches a location corresponding to a feature of interest in the space, step (c) involving using the aggregated marker data concerning such features to provide information about their popularity.

16. A method according to claim 1, wherein in step (a) a said virtual marker is deposited upon a said user requesting, whilst at a location corresponding to a feature of interest in the space, to be presented with a media item concerning that feature; step (c) involving using the aggregated marker data concerning such features to provide information about their popularity.

17. A method according to claim 1, wherein step (c) is effected for a further user moving through the space with said information being provided to that user.

18. Apparatus for providing information about a real-world space, the apparatus comprising:
- a first arrangement arranged to deposit and store virtual markers to indicate associated locations visited by each of multiple users in the space;
- a second arrangement arranged to aggregate the virtual markers deposited in respect of said multiple users, in dependence on their associated locations, either when the markers are being stored or subsequently; and
- a third arrangement arranged to use data about the aggregated markers to provide information relevant to use of the space.

19. Apparatus according to claim 18, wherein the first arrangement comprises a plurality of storage location cells that correspond to respective areas of said space, the first arrangement being arranged to associated strength values with the virtual markers, and the

5   first and second arrangements together being arranged to store and aggregate each deposited marker by having its strength value added to an existing aggregated strength value, if any, stored in the location cell that corresponds to the area covering the location associated with the marker.

10   **20.** Apparatus according to claim 19, wherein the first and second arrangements are together arranged, when storing and aggregating a said marker, not only to increase the aggregated strength value of the corresponding location cell by the strength value of the marker, but also to increase by a lesser amount the aggregated strength value of at least one location cell covering a said area adjacent to the area covering the location associated

15   with the marker.

21. Apparatus according to claim 18, wherein the first arrangement is arranged to retain the individual markers after marker aggregation by the second arrangement, the first arrangement being further arranged to associate with markers deposited in respect of at

20   least one user information associating together those markers whereby to enable the trail taken by the user through the space to be determined.

22. Apparatus according to claim 18, wherein the first arrangement comprises mobile devices intended to be carried by said multiple users, each mobile device being arranged to

25   deposit said virtual markers in respect of a said user carrying the device.

23. Apparatus according to claim 22, wherein the first arrangement further comprises a central system for storing the virtual markers deposited by the mobile devices.

30   **24.** Apparatus according to claim 18, wherein the first arrangement comprises an infrastructure system arranged to monitors the locations of the users and to deposit and store said virtual markers.

25. Apparatus according to claim 18, wherein the third arrangement is arranged to present, as said information, an image of a virtual landscape formed by the location-dependent aggregations of markers mapped to a representation of the space.

26. Apparatus according to claim 18, wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data to determine a path that follows ridges in a virtual landscape formed by the location-dependent aggregations of markers.

27. Apparatus according to claim 18, wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data to determine a path that follows troughs in a virtual landscape formed by the location-dependent aggregations of markers.

28. Apparatus according to claim 18, wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data to determine a path that avoids ridges in a virtual landscape formed by the location-dependent aggregations of markers.

29. Apparatus according to claim 18, wherein the third arrangement is arranged to derive information about a path through the space by using the marker aggregation data to determine a path that avoids troughs in a virtual landscape formed by the location-dependent aggregations of markers.

30. Apparatus according to claim 18, wherein the third arrangement is arranged to use the aggregated marker data to predict a next location for a further user moving through the space having regard to that user's current location, the third arrangement being further arranged to use the predicted next location to provide to a mobile device of the further user, as said information, either the identify of media items associated with that predicted next location or the items themselves.

31. Apparatus according to claim 18, wherein the first arrangement is arranged to deposit a said virtual marker whenever a said user reaches a location corresponding to a feature of interest in the space, the third arrangement being arranged to use the aggregated-marker data concerning such features to provide information about their popularity.

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32. Apparatus according to claim 18, wherein the first arrangement is arranged to deposit a said virtual marker upon determining that a said user is at a location corresponding to a feature of interest in the space and has requested to be presented with a media item concerning that feature, the third arrangement being arranged to use aggregated-marker

10   data concerning such features to provide information about their popularity.

33. Apparatus according to claim 18, wherein the third arrangement comprises a mobile device for enabling a further user in said space to request and be presented with said information.

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